

Replacement Abstract

## ABSTRACT

~~Raman fiber lasers and systems including Raman fiber lasers are disclosed.~~ Fiber laser systems. One system comprises a pump energy source, a first fiber and a WDM for transferring pump energy from the first fiber to a second fiber that comprises a grating for reflecting energy at a predetermined wavelength. The first fiber is devoid of a grating substantially reflecting energy of the predetermined wavelength. In another embodiment, a system includes a pump energy source and a fiber comprising a loop-shaped portion, a first non loop-shaped portion comprising a grating for reflecting pump energy, and a second non loop-shaped portion comprising a grating for reflecting a Stoke shifted wavelength. In another embodiment, a system includes a pump energy source and a fiber comprising a first pair of gratings for reflecting energy at a first wavelength corresponding to a first order Stoke shift, a second pair of gratings for reflecting energy at a second wavelength corresponding to a Stoke shift order greater than one, and a third pair of gratings for reflecting energy having a Stoke shift order greater than that of the second wavelength. No grating of the third pair is located between gratings of the second pair.